

WASTE MANAGEMENT PLAN (WMP) FOR OPERATIONAL WASTE

GENERAL WASTE AND RECYCLABLE WASTE
SSDA SUBMISSION

New Public School in Wagga Wagga SCHOOLS INFRASTRUCTURE NSW

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Date: 04th November 2019

New Public School in Wagga Wagga
WASTE MANAGEMENT PLAN

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NEW PUBLIC SCHOOL IN WAGGA WAGGA WASTE MANAGEMENT PLAN OPERATIONAL WASTE

PART 1 GENERAL

1.01 Executive Summary

The new Public School in Wagga Wagga is a new school campus bounded by Estella Road (south), CSU (north) plus Peter Hastie Oval (east). Accommodation is proposed for 480 students, 24 teachers and 8 staff initially, with core facilities/ space to accommodate 720 students + staff in the future.

The waste pad is located adjacent to the staff carpark and consists of various bins sitting within an enclosed space open to the sky. The access area is level between the bins and the truck. Truck access is from Estella Road and the truck collects the bins on site. The waste pad area has been designed to accommodate the anticipated waste volumes.

The waste produced and the actual floor space available will be managed in order to facilitate the internal management of waste, as follows:

- Minimize the number of collections.
- Minimize the volume of waste to be collected
- Segregate the waste
- Recycle the waste

Waste (general and recyclable/ comingled waste) will be initially collected in small bins placed throughout the school. The ground staff will collect and transport this waste, on a regular basis, to the bins on the new waste pad, located on school grounds. The waste pad will accommodate 2x 3000L skip bins, 1x 1100L bin and 1x 660L bin.

The truck will enter the site via Estella Road, in a forward direction, stand near the bins and the contractor will walk a short distance to the waste pad to retrieve the smaller bins, or directly collect the large bins in the truck. The loading area is level. The truck will exit the site in a forward direction.

Any other waste will be taken away in a large 3000L skip / bin as required (infrequent collection) and by separate arrangement as required.

This report was based on plans and information provided by Hayball Architects.

Basic requirements for waste handling facilities are as follows:

- To be of adequate size.
- Integrated with building design and site landscaping.
- Suitably screened from public areas.
- With appropriate access for collection.
- Assurance that OH&S requirements for waste contractors are met.

This report describes the waste management system proposed for the project, including:

- Estimates of waste quantity
- Waste space allocation & equipment
- Management of waste
- Waste segregation and minimization procedures
- Access

Regulations

This report has been prepared based on the Wagga City Council DCP. Note that there is no reference in that document for waste management strategies in schools. As such reference was made to other schools and a waste collection contractor. Reference was also made to the NSW Office of Environment & Heritage “Model Waste Not DCP Chapter 2008” for waste and recycling generation rates.

All waste stores will be fitted out to meet Building Code of Australia and Council requirements. This project is “state significant” and will be assessed by the Department of Planning.

PART 2 - WASTE VOLUME ESTIMATES

2.01 Access

Waste (general/ recyclable/ comingled/ paper/ cardboard) will be initially collected in small bins placed throughout the school. The ground staff will collect and transport this waste to the main waste store on trolleys or in bins.

The new waste pad for all bins is adjacent to the staff car park and the truck will enter the site from Estella Road. The truck will be able to enter and exit the site in a forward direction. Refer to traffic consultant's report for swept path diagrams.

The loading area will be level. The waste will be collected a private collection contractor.

2.02 Estimate of Waste Volumes

Background

- Number of proposed students = 720 (maximum future enrolment) + staff.
- As Council does not provide waste rates for schools, discussions were held with a waste collection provider to obtain estimated volumes
- Reference was also made to three other schools: Domremy College, Quakers Hill East and Parramatta Public School.

Findings from existing Domremy College (DC)

- Number of current students = 572 (WW is about 125%)
- Small bins used throughout to collect waste
- Larger bins (240 L) used near the canteen and the playground
- Ground staff collect this waste in 240L bins on a regular basis and transport it to the main waste area.
- **General waste** = 35x 240 L bins collected 1x per week = total 8400 L per week
- Using DC for comparison, the estimate for WW is 10185 L / week.
= 43x 240 L bins collected 1x per week
Or = 22x 240L bins collected 2x per week
Or = 16 x 660L bins collected 1x per week
- **Paper waste** = 12x 240 L bins collected 1x per fortnight = total 2880 L/fortnight
Using DC for comparison, the waste estimate for WW is 3600 L/week
= 15x 240L bins collected 1x per week
Or = 6x 660L bins collected 1x per week
- **Cardboard** = 1x 1500L skip collected once per fortnight
Using DC for comparison, the waste estimate for WW is 1875 L/week
= 8x 240L bins collected 1x per week
Or = 2x 660L bins collected 3x per week
- **E waste** = 1x 660L bin collected as required
This could be the same

- **Secure waste** = 1x 240L bin collected as required
This could be the same
- **Other** = 1x 3000L skip collected as required (for old fittings, etc, infrequent use)
This could be the same

Findings from Quakers Hill East Public School (QPS)

- Number of students = 703 (WW is about 102%)
- Small bins used throughout to collect waste
- Larger bins (240 L) used near the canteen and the playground
- Caretaker collects this waste on a regular basis (eg. daily) and transports it on a trolley to the main waste bins
- **General waste** = 1x 3000L bin collected 2x per week = total 6000 L/week
Using QPS for comparison, the general waste estimate for WW is 6120 L/week
= 26x 240L bins collected 1x per week
- **Recyclable waste** = 10x 240L bins collected once per week = total 2400 L/week
Using QPS for comparison, the recyclable waste estimate for WW is 2448L
= 11x 240L bins collected once per week

Paper and cardboard waste are not segregated
There is no E waste or secure waste bin

Findings from Parramatta Public School (PPS)

- Number of students = 600 (WW is about 120%)
- Small bins used throughout to collect waste
- Larger bins (240 L) used near the canteen and the playground
- Caretaker collects this waste on a regular basis (eg. daily) and transports it on a trolley to the main waste bins
- **General waste** = 1x 3000 L bin collected 2x per week = total 6000L per week
- Using PPS for comparison, the general waste estimate for WW is 7200L / week.
= 30x 240L bins per week
- **Recyclable waste** = 10 x 240 L bins collected 1x per week = total 2400 L/week
- Using PPS for comparison, the recyclable waste estimate for WW is 2880L
= 12x 240 L bins collected once per week

Summary of findings

- The comparison High School appears to produce more waste than the two Public Schools, but has better segregation and recycling procedures in place.
- The frequency of collection varies
- The general waste volume (which is the largest component) varies from 43x 240L bins, to 26x 240L bins to 30x 240L bins
- The High School makes use of a skip for cardboard

Advice from local waste contractor

Waste provision for new schools

The waste collection contractor for the area is Cleanaway, contact Chris Cavanaugh phone 0407 214 092. He advised that, for schools, they provide 3 cubic meter bins for general and cardboard waste and 1100L bins for drink containers/ plastic/ metal.

Additionally advice from the local waste contractor indicated collection would include general, cardboard and comingled waste separated by category. Furthermore e-waste will be collected at call in a separate bin. The collection frequency is subject to the actual waste volumes being produced.

2.03 Waste generation schedule

Information from the 3x comparison schools indicates that Quakers Hill East Public School is a suitable benchmark as it is a Public School and mid level in terms of waste production. Going forward, a central waste storage pad for the following bins is proposed:

General waste

Based on Quakers Hill Public School = 6120L/ week

Assuming that waste separation will facilitate recycling and thus reduce the general waste volume (assume 37% or 2265L/week reduction) = 3856L/ week

= 2x 3000L bin collected 1x per week

Size = 2060 wide x 1520 long x 1540 high

- Recyclable waste

Based on Quakers Hill Public School = 2448L/ week

Plus 2265L by having better recycling practice = 4713L/ week

Assume 60% **cardboard** = 2830L/ week

= 1 x 3000L bin collected 1x per week

Size = 2060 wide x 1520 long x 1540 high

Assume 40% **comingled waste** = 1886L/ week

= 3x 660L bin collected 1x per week

Size = 1280 x 780 x 1235

Notes:

Based on Domremy College, a 1x 660L bin for e-waste will be provided in the pad area, collected at call.

Bin size = 1370 long x 850 wide x 1250 high

- Any other waste, such as unwanted equipment or furniture, will be collected on a yearly basis, at call
- The waste pad has been sized to suit 3 x 3000L bins and 4 x 660l bin.
- In the shorter term, the enrolment will be 480 students, or 67% of the total
This would be managed by having less frequent waste collection
- Colour coded bins (say 240L) will be provided at strategic locations in order to facilitate waste separation at source, eg playground
- A composting area will be provided, refer to landscaping plans
- The bin and truck parking area are level
- Truck access has been designed to suit the collection truck. Refer to the traffic report
- Refer to traffic report for swept path diagrams
- Concrete slab has been designed to support the weight of a loaded truck plus the bins
- The collection truck will be able enter and leave the site in a forward direction or with a minimum need to reverse. Refer to traffic report.
- Bin access has been designed to suit bin size and weight
- Caretaker will collect waste on a regular basis and transports it to main waste area.
- Access to waste pad will be safe, convenient to all users and meet WorkCover NSW
Occupational Health and Safety guidelines.
- Waste pad has been integrated into the overall design
- Waste pad screening will conceal bins from view from the street
- The waste volumes and break up are estimates and are subject to a variety of variables. This can be managed by a lower or a higher collection frequency, subject to need.
- This report has been based on drawings provided by the architects
- This report is part of the development application process. The final sizing of waste stores, frequency of waste collection and any required handling equipment may be further developed during the detailed design development phase.

PART 3 - MISCELLANEOUS

3.01 Waste Segregation and Minimisation – EPA policies

The waste strategy for the development will be continually evaluated by the School Management, to improve the service provided and to achieve the NSW Government's waste reduction targets, through improved recycling methods and aiming to minimize waste.

The School Management will prepare an Environmental Management System addressing the waste collection and recycling procedures. This will set out expectations and achievable objectives. The School will need to implement the following:

Avoidance

School to manage this to discourage the generation of waste, eg. student lunches to be in reusable containers, use of suppliers with in-house sustainability policies, etc

Resource Recovery

School to manage this by encouraging recycling of every potential item, eg. paper, electronic equipment, furniture, etc.

Disposal

School to manage this by arrangement with waste company, eg. separation of recyclables into various categories. Use of waste collection provider with in-house sustainability policies.

3.02 Waste Store Requirements

The waste pad/ bin store is open to the sky. The bin parking area has been designed in line with Council requirements. The following requirements are also subject to the Department of Planning Conditions of Consent.

1. Floor finish

The floor will be a washable, non-slip, smooth, even surface, finished in a light colour, consisting of a sealed concrete slab, graded and drained to meet Water Authority Guidelines.

2. Wall finish

The pad is open to the sky. The "walls" are metal screens

3. Ceiling finish

The waste pad is open to the sky

4. Drainage

The waste pad will be graded and drained to sewer and grease trap. Refer to Water Authority and hydraulic consultant for requirements

5. Doors

Gates have been provided.

6. Ventilation

The waste pad is open to the sky, the walls are screens and it will be naturally ventilated.

7. Lighting

Waste pad will be suitably lit with artificial lighting.

8. Safety

All equipment will have safe operation procedures in place. Appropriate safety signage will be provided. Note that large 3000 L bins are too heavy to be moved by hand.

9. Washing

A trapped gully and hot and cold water mixer tap will be provided. Refer to Water Authority
And hydraulic consultant for requirements

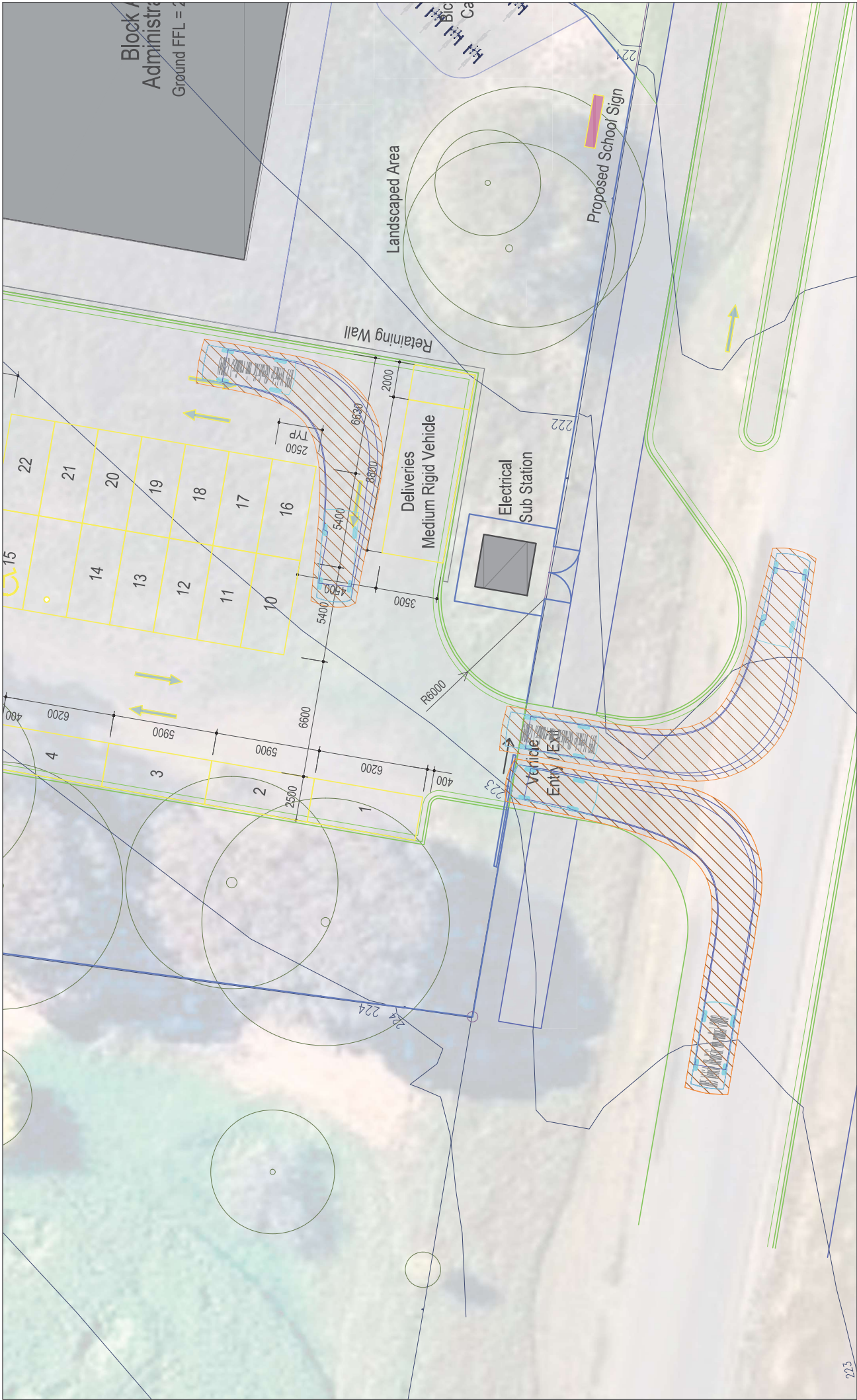
10. Grease Trap

Refer to Water Authority for requirements

11. Path of travel – from bin holding areas and/ or waste stores to truck

- No steps or kerbs are proposed
- Maximum gradient = 1:14 (bin tugs may be required)

Appendix A – SWEPT PATH DIAGRAMS



Notes:

This drawing is provided for information purposes only and should not be used for construction.

Document Info:

Drawn by: Shihui Hu
File name: AG10491001 Wagga Wagga.dwg

Project:

1049
High Quality Classrooms (Wagga Wagga)

Date:

17-Oct-19

Scale @ A3:

[scale]

Drawing Number:

AG01

Client:

Hansen Yurken Pty Ltd

Drawing Title:

Site Access
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